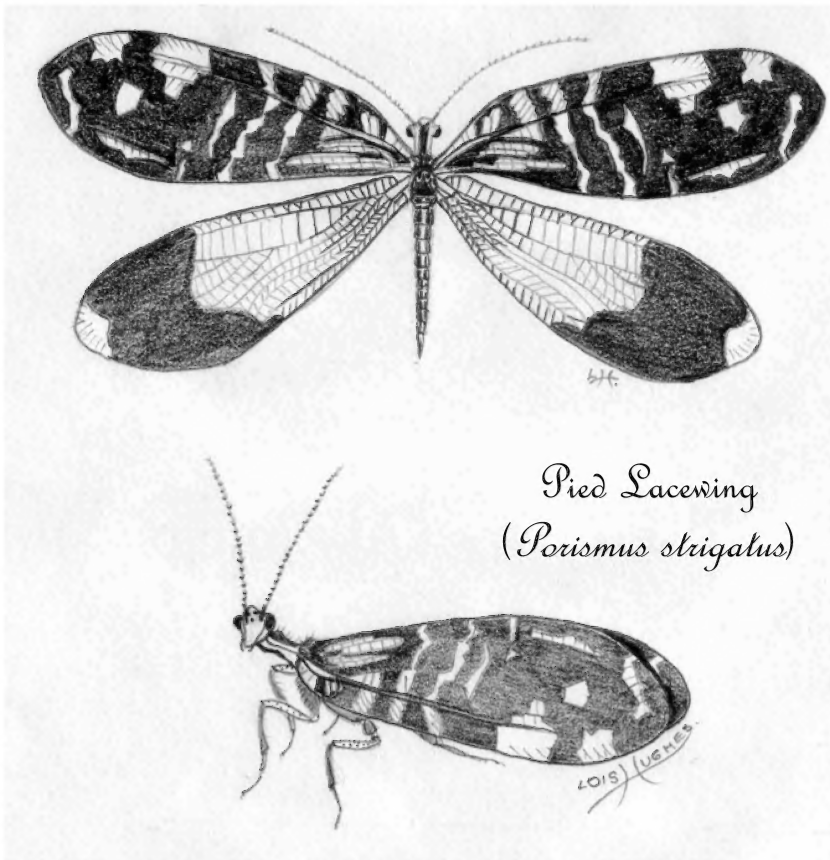




Pied Lacewing
(*Porismus strigatus*)

Butterfly & Other
Invertebrates Club Inc.
Newsletter

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CLUB PLANNING AND ORGANIZING GROUP - 2005

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PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter.
See BOIC Programme.

CONTACT ADDRESS AND MEMBERSHIP DETAILS

PO Box 2113, Runcorn, Queensland 4113

Membership fees are \$15.00 for individuals and \$20.00 for families, schools and organisations

AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, native bees, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:

June issue – May 21stDecember issue – November 21st

COVER DRAWING

Pied Lacewing (*Porismus strigatus*) by Lois Hughes



PRESIDENT'S POSTING

Welcome to Issue #38, as you may have noticed we are a little late this month. This has been due to a number of set backs for some of those who are most involved with producing this newsletter. Everyone is now hopefully on the mend. On a much sadder note we mark the passing of a long-time Club member, Lorna Johnston.

Of particular note since the last newsletter is the release by the Brisbane City Council of a study of terrestrial invertebrates in 10 locations around Brisbane that it commissioned the Queensland Museum to undertake. We'd like to congratulate both the Council and the Museum for this excellent piece of work and for helping to put invertebrates on the radar.

With the publication of the 2nd edition of the butterfly host plant list, and with another database of host and food plants for other invertebrates in the early stages of development we are seeking a skilled database developer as a volunteer who can develop the file structure for these databases using a relational database program, preferably Filemaker Pro or Access. Specifications will be available. If you have these skills, or know someone who can donate their services please let me know. While on the volunteering subject, anyone who'd like to help out with information stalls would also be most welcome. You get good company and a chance to learn much more.

Looking forward to a great end of year excursion in the Conondales. Hope to see some of you at all or part of the event.

Helen Schwencke

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Pied Lacewing (*Porismus strigatus*) Order Neuroptera, Family Osmylidae, Subfam. Porisminae

This very pretty lacewing (with body length about 1.2 cm and wingspread approx. 4 cm) is one of the most brightly coloured osmylids, being steel-blue or black with lemon-yellow to pure white markings. The authoritative CSIRO publication *Insects of Australia* (2nd ed. 1991) suggests that parts of the body are reddish brown, but I have not yet found this pattern.

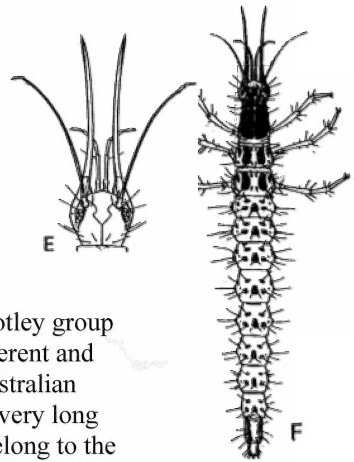
Its distribution is noted as “drier eucalypt forests in the south-east” but I have found it in wet sclerophyll forest at Cunningham’s Gap. There is a flourishing colony in semi-montane eucalypt forest at Bolivia Hill south of Tenterfield.

The adults fly from tree to tree, in most cases alighting on the trunks of stringybark eucalypts where they blend in cryptically. The carnivorous larvae are said to live under bark but I have yet to find any.

The illustration (F) from *Insects of Australia*, is a drawing of the larva of a related Osmylid species, the head (illus. E.) shows the long tapering straight jaws typical for this family. The other characteristic of Osmylidae is that they are the only family of lacewings to have ocelli or eyelike spots between the compound eyes of the adult. The actual dimensions of the adults illustrated by Lois Hughes’ on the front cover, are body length 15mm. and wingspread 40mm.

Although the family occurs over much of the world it appears to be absent from North America.

The theme of this issue, lacewings, brings together a motley group of insects with 14 families in Australia and all very different and quite distinctive. There are (in 1991) 623 described Australian species from a world fauna of about 5,000. Some with very long spherically clubbed antennae are called owl-flies and belong to the Ascalaphidae, while the related Myrmeleontidae contains the true antlions. An interesting family, Mantispidae, have adults with raptorial forelegs similar to the familiar preying mantis. Some members of this family go a step further and are brightly coloured, day flying and mimic social wasps. Newsletter No.17 (June 2000) contained an article on Mantispid Lacewings and mentioned the wasp-mimic species *Euclimacia torquata* in particular.



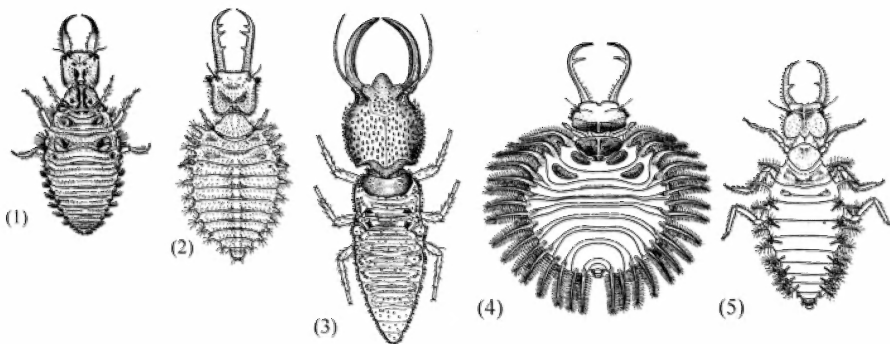
We have mentioned the spectacular moth-like day flying *Psycopsis* lacewings in at least two previous articles e.g. Newsletter No. 16 (March 2000) and more recently No. 36 (March 2005) with an article on the rare Snake's Head lacewing *Megapsychops illidgei*. In this issue we are reprinting an historical article on this insect, taken from a 1926 issue of the Australian Museum Magazine, which I had found under a pile of old journals, in the bottom of a carton, on the top shelf of an old locker in my storeroom! Co-incidentally Susan Cantrell, from Mt. Tambourine, also had a copy of this old journal when I visited her in June this year. We discussed a proposed field study to attempt to locate *Megapsychops* during its supposed breeding season in November this year. We plan to do some light trapping around the time of the first November rains.



Larva of a species of myiodactylid lacewing – Photo by Peter Hendry

Peter Hendry has contributed a digital photograph of the larva of a species of myiodactylid lacewing that was perfectly camouflaged, flattened, found wedged between the veins on the underside of a Creek Sandpaper fig leaf (*Ficus coronata*) and discovered whilst we were searching for larvae of the Common Moonbeam butterfly (*Philiris innotata*) which is also found in this situation.

A line drawing (4) Myiodactylid, reproduced from *Insects of Australia*, clearly shows the unusual broad, circular abdomen, with multiple lateral appendages on each segment covered in minute setae (hairs). For comparisons, line drawings are also reproduced for larvae of the (1) Owl-fly (2) Antlion, (3) Psychopsid and (5) Nymphid groups.



Sketches taken with permission from CSIRO's *The Insects of Australia*



Finally John Stumm provides an interesting, illustrated article on his experiences with the eggs, larvae and adults of the common Nymphid, *Nymphes myrmeleonides*. Read on!

John Moss

Notes on the Common Lacewing (*Nymphes myrmeleonides*)

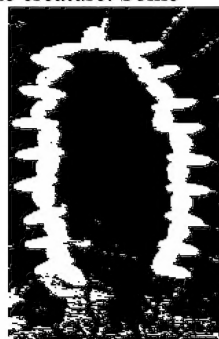
Wildlife of Greater Brisbane [Queensland Museum 1995, p.97] states there are 14 Lacewing families containing 600 species in Australia and that 13 of these families are represented in the greater Brisbane area. My interest is limited to the 2 species that “invade” my unit at Albany Creek. One has a small green body [wingspan 15-20 mm] and the other [4 specimens] has a span of about 80 mm with an orange head and thorax and distinctive white patches with darker borders at the tip of each wing. Wildlife of Greater Brisbane identifies it as *Nymphes myrmeleonides* [order Neuroptera, family Nymphidae] and is the species on which I report.

W.G.B [p.100] also illustrates *Myrmeleon pictifrons*, wingspan 50 mm, un-patterned wings, body brown and claims its “larvae are the common pit-forming antlions found in loose soil under suburban houses”. No buildings which satisfy these requirements exist within 200m of my unit

Some time after 15/12/2004 I noticed a collection of eggs on stalks, in a “paper clip” shape, high on the wall of my living room and about 150mm above a sliding glass door leading to my balcony where an adult *N. myrmeleonides* had spent some time. Because of their inaccessibility to close-up photography I did nothing until late on 31/12/2004 when I noticed their neat pattern had changed to larger, darker, irregular marks, which suggested hatching had occurred.

About 10 hours later I transferred some to a 70 mm Petri dish. Eight survived and were clearly lacewing larvae. The average length of those I collected on 31/12/2004 was 3mm with head and jaws almost equal in size to the rest of the creature. Some measured on 5/1/2005 were 5 mm long.

I phoned John Moss. He suggested my best chance of rearing the creatures was to ensure adequate hydration and provide a carnivorous diet, preferably of aphids. None were available and I concluded that a creature with such large jaws was unlikely to have tiny aphids as its preferred food. As an interim measure I offered them a tiny piece of meat loaf. Within 4 hours three “lions” were swarming over this but then deserted it. I caught a small fly, immobilized it in the deep freeze and beheaded it. A nearby “lion” went to it and spent about an hour piercing its abdomen with the tips of its jaws. Thereafter I offered flies and other small insects, including moths. Although I did not see any feeding, the shrunken abdomens of the food insects suggested it had occurred.

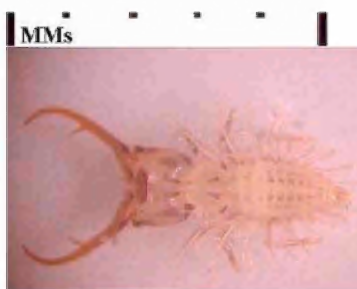


CSIRO's The Insects of
Australia





Span 80 mm
Body length 30 mm
order Neuroptera
family Nymphidae
Nymphes myrmeleonides
1/2/2005



Length approx. 5 mm
LACEWING LARVA
Nymphes myrmeleonides
4/1/2005

I achieved good hydration by placing a double layer of paper towel about 20 X 20 mm dampened by daily applying drops of water from a 2 ml syringe. Their food and the animals were placed on the paper and they were content to remain there for the first 18 days. After the 18th day most tended to move off the dampened paper and did so after being returned to it and I was hopeful that the first moult was imminent. Not so. All 8 larvae collected by me died over a succession of days from 18/1/05, the last being on 28/1/05.

Under the heading "Family Nymphidae" (Blue Eyes Lacewings), Peter Chew's page shows the same adult as mine, and also a close-up taken by Keith Power of Toowoomba. AND under the family *Myrmeleontidae* it shows larvae identical with mine also photographed by Keith Power. Something odd? (Ed. Not really – many lacewing larvae species look very similar! See comment below)

GROWTH RATE

1/1/2005 [Day 1]	Length about 3 mm (with head and mandibles 1.5 mm.)
4/1/2005	Average length 5 mm.
9/1/2005	Lengths 6, 6, 7, 7, 8, 8, 10, 10mm.
13/1/2005	Average length 6 – 7 mm.
18/1/2005	8. [Average 7 mm.]
22/1/2005	2. [7 mm & 8mm]
26/1/2005	1. [7 mm]

I'm unable to explain the shrinkage which occurred after the early rapid growth. I changed the food about every second day. There was no suggestion of cannibalism and they were often seen walking over one another.

SOME LINKS.

http://www.geocities.com/pchew_brisbane/LaceWing.htm
<http://www.amonline.net.au/factsheets/lacewings.htm>
<http://www.ento.csiro.au/education/insects/neuroptera.html>

Some lacewings are still breeding. On 15/3/2005 I noticed a further collection of eggs on sticks on an outside wall of the Arana Bridge club at Ferny Hills. When they



hatch the larvae could fall onto the raw earth under the building and, presumably, build their ant traps there.

John

Stumm

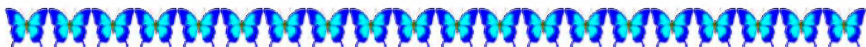
Ed.: Very little is known about the biology of lacewings – a search of the available literature has revealed the following:-

- The following note is taken from “A Field Guide to Insects in Australia” (2nd Ed. 2003) by Paul Zborowski and Ross Storey (page 102)
“As the favourite food of lacewings includes soft sap-sucking pests such as aphids and scale insects, their presence has a major biological control benefit in gardens and farms.”
- George Hangay and Pavel German in their 2000 Nature Guide paperback “Insects of Australia” just state, in relation to *Nymphes myrmeleonides*, that “the larva is a predator of small arthropods”.
- The definitive CSIRO publication “Insects of Australia” (2nd Ed. 1991) in relation to *Nymphes* species (family Nymphidae) (p541) says “They are found in open forest habitats in damp situations”
- Wildlife of Greater Brisbane (p99) comments “in forested areas and established suburban gardens”.
- Illustrations on p540 of Insects of Australia show the similarity of the larvae of John’s species (*Nymphes myrmeleonides*) to those of true “antlions” in the related family Myrmeleontidae. The species name *myrmeleonides* literally means resembling antlions and probably refers to the larvae only, as the adult antlion has short clubbed antennae whereas the adult *Nymphes* has longer uniform antennae. There is also a difference in wing shape and patterning.
- Finally at least one of the above references suggests that true antlion adults merely scatter their eggs over the appropriate sandy soil – they don’t attach them to the substrate by stalks.

PLANT PROFILE

***Atriplex nummularia* – Old Man’s Saltbush (family Chenopodiaceae)**

Amongst the 50 or so species of Saltbushes that occur in Queensland (mostly in the genera *Atriplex*, *Chenopodium*, *Einadia* and *Rhagodia*) a few stand out, either for their sheer beauty, or in relation to their insect associations. The digital photo of *Atriplex nummularia* in flower bud, is a specimen in the garden of Bernie and Rhona Wilson of Sheldon in the Redland Shire. The current Queensland Herbarium census gives its distribution in Queensland as mostly in western pastoral districts (of semi-arid habitat) as for most saltbushes. A few others are coastal, occurring mainly in mangrove and saltmarsh situations. They are the hostplants for the diminutive



Chequered Blue butterfly (*Theclinesesthes serpentata*). Other chenopods that are predominantly coastal in distribution (in genera such as *Suaeda*, *Enchylaena*, *Halosarcia* and *Sarcocornia*), are hostplants for the even tinier Saltpan Blue butterfly (*Theclinesesthes sulphitius*).

When *A. nummularia* is in full flower in early spring, it attracts many insects to its copious pollen and nectar. This includes many native bees, mostly small species such as *Trigona carbonaria* and *Austroplebeia australis*.

The plant in the Wilson's garden, measuring approximately 2 metres tall and about 1.5 metres in diameter, is probably close to full size. Most other species are smaller. Their requirements vary but soil type should not be too rich and water should only be applied sparingly as they are adapted to low rainfall areas, on alluvial plains.

Having said that, a multi-stemmed plant (or plants) in the Billabong Nursery grounds at Manly West in Brisbane, is about 6 metres long by about 2 metres wide and may be the result of successive suckering from one initial plant.



Atriplex nummularia – Old Man's Saltbush
Photo by Peter Hendry

The Winter 2005 edition of Nature Australia has an article by Tim Low on saltbushes and illustrates this species in colour. It has been extensively cultivated for stock feed, and like several of our "good natives" has become a weed in the USA (California)! On the positive side it has been grown successfully in saline areas which would otherwise have been abandoned for agriculture and grazing.

John Moss

CLUB'S NEWSLETTER CD

Club's Newsletter CD – progress report

I would like to thank those Club members who responded to our appeal for a copy of the computer program, Adobe Acrobat, with offerings of advice on alternatives. Unfortunately the low cost alternatives that were trialed weren't able to produce a product that is WYSIWYG (what you see is what you get), and therefore, not able to produce a product that is professional and able to be distributed into the future.



For the CD to work properly we need the information that shows on the screen to look exactly like what it did when it was printed out and posted (WYSIWYG). The CD will have the added advantage of including colour photos, whereas when we print it we are only able to do so in black and white.

The other advantage of the CD will be that you will be able to look up all the items about any particular animal and plant that have been produced in all the newsletters via a link from an index. This will be able to be done using the program, Acrobat Reader, that now frequently comes with all new computers or is able to be downloaded for free. Unfortunately, this program only allows you to use the CD that we will be producing, it doesn't allow you to construct the CD's content in the first place.

At present it is our intention to release the CD with the March 2006, No 40 issue, and then to release an update each year. An initial subscription to the CD is likely be approximately \$40 to help us recover the costs of purchasing the program. Updates at a significantly lower cost, mainly to cover copying and mailing out, will be available annually to those who have purchased an initial CD.

Over the 11 years since our establishment, so much new information and new observations have been published in our Club's newsletters that I believe the CD will become a very useful way to access the information easily.

I'd like to publicly thank Bob James for his work so far in trying out various alternatives for producing the CD and for his forthcoming work into the future thereby making this project possible.

Helen Schwencke

AUSTRALIAN NATIVE BEES #3

Working Bees

I concluded my previous article in this series by highlighting the obvious size difference between our stingless bees and the introduced honeybee (*Apis mellifera*). I also indicated there were even more significant differences in their lifestyles that we would explore in this issue. I am no 'ologist' of any description but it seems to me that the two species followed a parallel evolutionary course in some respects, but diverged significantly in others. I also understand that some species of stingless bees are very ancient if the specimens found preserved as fossils in Amber are anything to go by. However, they may not have always been stingless. The scientists tell us that there are the vestigial remains of a sting in their abdomens. Unfortunately the rudimentary microscope from my Junior Science Kit is nowhere near good enough to reveal that kind of detail for me.



To put the differences between stingless bees and honeybees into perspective perhaps we should first look at some of the similarities. The colonies of both species consist of a single fertile queen, hundreds or thousands of female worker bees and a relatively small contingent of male bees (drones). The honeybee and stingless bee workers collect pollen as a protein source and nectar (which they turn into honey) as the energy food for the hive.

Honeybees store excess honey and pollen in regular hexagonal cells contained within vertical combs made of pure beeswax. Stingless bees on the other hand hoard their excess stores in irregularly shaped honeypots which overlap and are attached to the walls and ceiling of their home. This makes the harvesting of stingless bee honey more difficult. The honeypots are constructed from a dark brown substance called cerumen which is made from a mixture of wax and tree resins. Honeybees use the same hexagonal cells for raising their new workers as they use for honey and pollen storage, although young drones and queens (perhaps that should be princesses?), require more spacious accommodation. The cells used for raising new bees are collectively known as 'brood'. Stingless bee brood cells vary in both shape and arrangement from species to species and in some cases may be the only way of identifying a particular species in the field. They are distinctly different from their storage cells and their arrangement can extend from the regular flat spiral produced by *Trigona carbonaria* to the higgledy piggledy pile of cells used by *Austroplebeia australis*. None of our stingless bees arrange their brood in anything like the vertical combs used by honeybees.

The differences are starting to emerge and it's here in the bee nursery where they become more pronounced. To produce new workers honeybee queens lay fertilized eggs in the bottom of empty normal cells. Nursery worker bees, starting with a special baby bee formula known as 'bee milk', progressively feed the larvae that subsequently hatch out. It is not until the larvae develop to the stage where they are ready to pupate that the cells are finally sealed over.

Stingless bees do things quite differently. A worker cell is fully provisioned and after an inspection the queen will lay a fertilized egg on top of the liquid food. The cell is immediately sealed over by a worker bee and the larva is left to develop and pupate on her own within the sealed cell. Stingless queen bee cells are also much larger than the worker cells and with *Trigona carbonaria* bees are positioned on the outside of the brood spiral. They appear to be provisioned and sealed in the same manner as worker cells. It seems that only the size of your meal determines whether or not you become a toiler or royalty in stingless bee society. Drones are produced from unfertilised eggs in both honeybees and stingless bees.

Natural hive propagation is the last aspect I will be able to deal with in this issue. In honeybees this is achieved by the old queen (having been trimmed down to her flying weight) accompanying a large swarm of workers to a new location. The swarming



workers are engorged with honey which they convert to wax for construction of comb at their new premises. A virgin queen emerges from the old hive, mates and returns to it to continue that colony. Beekeepers have modified this behaviour of honeybees in all manner of ways to produce strong productive hives and to avoid the loss of bees due to swarming, but here we are dealing with their natural hive reproduction process.

Again stingless bees do things differently. After her initial mating flight the queen hangs up her flying goggles and helmet for good. When a hive decides it wants to produce a new colony it will send out scout bees to find a suitable location. Worker bees will then visit the site over time, clean it up and prepare it for occupancy; eventually stocking the new place with some honey and pollen. I understand this may take months or even longer in some cases. Eventually a new virgin queen from the old hive arrives with her entourage to take up residency. Her mating flight occurs shortly afterwards and brood laying commences. It is said the old hive maintains a supportive role towards its offspring, sharing workers for some time.

After studying this behaviour, some clever people, like Dr Tim Heard of the CSIRO, worked out ways of artificially housing and propagating hives of our stingless bees. But more of that in future issues.

John Klumpp

OBITUARY LORNA MAUD JOHNSTON

Lived: 27 October 1940 - 19 August 2005.

Lorna Johnston passed away suddenly and unexpectedly on the 19th August. It is important that Lorna, and her late husband, Ron's pioneering roles in butterflies and butterfly gardening does not go unremarked. Lorna was a member of the Butterfly & Other Invertebrates Club from soon after its establishment in 1994. My first memory of Lorna was hearing about her presentation on butterflies and their host plants to a Society for Growing Australian Plants branch meeting in the early 1990s. She has been a stalwart supporter and sometime contributor to the Club's newsletter. In particular Lorna's work (with her son, David) in collecting, raising and photographing Laced Fritillary butterflies and making this information available to our Club and its members has been invaluable to the conservation of this species. She will be sorely missed.

Born to William and Maud Major in Melbourne on the 27th October 1940, her early years were spent at Werribee where her parents had a lovely garden with roses and grevilleas, as well as a great vegetable garden and chickens. The creativity that developed in those early years never left her. Her Australian terrier "Rags" was the forerunner of many dogs and a love for animals that was lifelong.

She developed an appreciation for art before she commenced school and as a five year-old she began collecting seashells, which remained a lifelong interest. As a six-



year old, Lorna was given a small bird's nest fern, and thus began her lifelong interest in ferns. The original fern is still in her garden today.

In 1946 the little family moved from Melbourne to Malanda in North Queensland. Moving south to Bargara in 1947 and, in 1948, to Brisbane to follow work, the family settled in Birkdale, where they had a view of Waterloo Bay and Green Island. Lorna's delight was the bush behind the house. Her earliest memories of wildflowers concerned a Banksia that grew on the fence of a neighbour. She was so fascinated by these beautiful flowers that she took to illustrating her homework books. She had a passion for wildflowers grown locally.

Her schooling was at Ormiston State School and some time at Birkdale, before moving to Moreton Bay Girls High School at Wynnum in 1952. She took up piano lessons each week and became an accomplished pianist. She excelled at all forms of ball games and represented her School. She was awarded prizes for art and Scripture at School. In her 15th year she became involved with the local Methodist Church at Cleveland. Lorna's dad purchased Irish terrier Breeding Kennels, and Lorna was thrilled to be able to show puppies and dogs, and win prizes at National Kennel Club Shows.

Lorna's variety of interests was very broad. They included the Horticultural Society, floral art, china painting, shells (she was a Qld.Museum volunteer in shells), butterflies, rock hunting, camping and sight seeing, water colour painting, oil painting, acrylic painting and pastels, pen and ink and pencil sketches, calligraphy, embroidery and quilting. Then there was her Society for Growing Australian plants, Grevillea Study group, gardening, birds, day lilies and hybridising, her dogs, especially Rusty. She loved reading and had her own wonderful library, singing in Wellington Point Methodist Choir, and a musical group, and years ago playing the piano for Birkdale Methodist Youth Choir and Sunday School.

Lorna and Ron Johnston met at the Cleveland Methodist tennis courts during a youth group gathering. They were blessed with their two children, Robyn and David. In their mother's vast creative field she drew her children into the study of horticulture and floral art. Lorna and Ron made sure that the Redlands benefited from their passion for Australian plants and a society was formed locally.

In 1986, shortly after a round Australia trip Ron died suddenly. Lorna remained at the family home until 1993 and after cancer surgery she moved into her new home at Thornlands where she established a butterfly enclosure.

In the past few years Lorna has reached new heights in her skill as an artist, and that has been allied to her vast interest in the natural order. One week before her passing she released an "Artist's Statement" dated 12 August 2005:

"As an artist I feel deeply the challenge of conveying an appreciation of the colour and the light of the Australian landscape to others, striving to depict the more intimate



elements of the form and beauty of our flora and fauna. Presently I am experimenting with a wide range of media combinations in an attempt to record the many differing characteristics and textures of my subject matter. Australian shells have become my most recent challenge, possibly influenced by my work as an honorary laboratory technician with Queensland Museum. My aim is to achieve the highest possible standard and to give lasting pleasure to those who view my work."

Apart from all of the things that captivated her life, Lorna's family found her a wonderful mother and "mother-in-law" who was always willing to give practical and loving support. She was a very gentle, loving and accepting person who made her way into the hearts and lives of people of all ages, from the little kids who took her butterflies and broken cocoons, to the old who delighted in her smile and her encouragement.

This obituary is largely an edited version of the Eulogy by Barry Dangerfield presented at Lorna's very well attended funeral which demonstrated the respect with which Lorna was held in the community. To mark Lorna's passing three butterflies were released. On behalf of the Club, I thank Ross Kendall of Butterfly Encounters for making these butterflies available.

As a further tribute to Lorna and her contribution to the butterfly enthusiast community, we will be holding a visit to her garden and butterfly enclosure, to be guided by her son, David, on the 15th October, at 2pm, see the program for details

Helen Schwencke

REPORTS

Note on Richmond Birdwing Recovery Program Planting

Our club networks with the Bulimba Creek Catchment co-ordinating Committee, of which S.C.R.U.B. Catchment Care, a Bushcare group within Brisbane City Council's Habitat umbrella, is a member.

SCRUB invited us to participate in a planting of the main SEQ. lowland hostplant of the Richmond Birdwing butterfly, along Buhot Creek corridor, near its confluence with Tingalpa Creek, in the Burbank/Sheldon area. This corridor forms part of the boundary of BCC and the Redland Shire, and already contains many hostplants of some of our more spectacular and interesting butterflies e.g. *Wilkiea huegeliana* for the Regent Skipper (*Euschemon rafflesia*), *Flagellaria indica* for the Southern Large Darter (*Telicota anisodesma*) and *Trophis scandens*, or Burny Vine, for the Purple Crow (*Euploea tulliohus*).

On Sunday 21st August, two of our members assisted SCRUB convener John Evans, local bushcarer Sally Jenyns, and BCC Habitat Co-ordinator Rob Mollison (as well as



half a dozen other volunteers) in clearing lantana and planting 40 Birdwing Butterfly Vines (*Pararistolochia praevenosa*) along the creek-line.

John Moss, Peter Hendry

ITEMS OF INTEREST

Richmond Birdwing Recovery Network – ‘Bring back the Birdwing Butterfly’

A new phase is being implemented for the Richmond Birdwing Conservation Project, commencing in 2005.

The Network will be officially launched on the morning of Saturday 29th October from 9.00 am at Brisbane Forest Park Headquarters, The Gap.

Community members, conservation groups and representatives from local, state and federal agencies can become members of the Richmond Birdwing Recovery Network. The aims of the network include:

- (a) Planning and re-establishment of corridors – to return the Birdwing back to its former range. Key corridors for the first phase of this project will be the watercourses running from the D’Aguilar Ranges down to the Brisbane River and beyond;
- (b) Propagating, planting out and caring for Richmond Birdwing Vines (*Pararistolochia praevenosa*) – the food plant for caterpillars of the Richmond Birdwing butterfly;
- (c) Strengthening outlying populations and re-establishing corridors – at the northern and southern parts of the Birdwing’s range;
- (d) Continued information sessions, workshops and newsletters to raise public awareness about the problems the Birdwing and other sub-tropical flora and fauna are facing.

Yearly subscription is \$10.00 (add \$5.00 for morning tea if you are attending the launch). Post to Richmond Birdwing Recovery Network, 2 Emily Street, Marsden, Qld. 4132. Dr. Don Sands and Ms Sue Scott (Richmond Birdwing Recovery Network Co-ordinators) Email – Susanne.Scott@bigpond.com Telephone enquiries to Sue Scott on 07 3200 7432; fax 07 3805 3589

A Journey of Discovery – The Laced Fritillary Print Story by Lois Hughes



Not as spectacular as the flamboyant Richmond Birdwing butterfly and the resultant high profile publicity and assistance it has received, the delicately patterned Laced Fritillary is nevertheless just as significant and worthy of our care and consideration. Born out of this care and concern for its survival, the Butterfly and Other Invertebrates Club commissioned me to do a painting of the lifecycle of this now elusive butterfly as part of a public awareness campaign to alert us all to its precarious state and to encourage us to seek ways to increase its chances of survival in a changing environment.

The Club has, on two occasions, sought grants to implement a recovery programme but funding was refused. The painting was to have been part of the education process involved.

Various Club members have quietly continued behind the scenes to search for the butterfly's host plant in the wild, in the expectation of finding a thriving population tucked away somewhere. The search has so far proved fruitless in Queensland's south-east. However, in 2001, club members confirmed a sighting of a male Fritillary near Port Macquarie in N.S.W. Who's to say it isn't alive and thriving in a secret location just awaiting discovery, as has been the case with several other rare or endangered butterfly species.

The painting, crafted in artist's gouache and watercolour was a six month labour of love. I went on a journey of discovery, working from 20 year old photos of caterpillars and butterflies reared in captivity by Lorna and David Johnston and in consultation also with various club members and from text books, the Laced Fritillary came alive once more in vibrant colour.

Not a lot is known about this butterfly or its preferred or indeed its vital requirements, but much can be gleaned from the habitat that its host plant, the Arrowhead Violet, thrives in. Melaleuca swampland is its natural habitat and much of this land has been drained and cleared to accommodate our expanding population. Exotic weeds have overgrown and smothered some wild Violet populations, both serious threats to the butterfly's survival. Without a host plant on which to lay its eggs and to feed the caterpillars until maturity, the butterfly has no chance of survival.

The violet itself is worthy of a place in our gardens because of its beauty alone. It flowers in colours ranging from white, through light to rich purple and even pink. One form has a delightful perfume. The leaves are also quite varied, from the wide large leaves depicted to narrow, strappy shapes. It flowers annually during the cooler months but can also produce viable seed throughout the year. The seeds are flung far and wide and often germinate in unexpected places.

We encourage club members to grow the violets (they do very well in pots) because the Fritillary caterpillar needs large quantities of leaves to fulfil its requirements until maturity and to prevent cannibalization occurring during scarcity. Club members,



including myself have been pleasantly surprised to find other species of butterflies not formerly seen in a locality, fly in and breed after their host plants were included in our gardens. How they locate these plants is a mystery.

Frank Jordan has discovered an association between two other butterfly species and the Laced Fritillary which are mutually beneficial. The Common Grass Yellow, *Eurema hecabe*, pollinates the violet flowers during winter, enticed by the nectar when other sources may be scarce. Most other butterflies are dormant during winter but it is known that Fritillaries were on the wing throughout most months of the year and may also have used the violets as a nectar source.

The Fritillary could also derive benefit from another butterfly whose native host plant, the trailing vine, *Cynanchum carnosum* or Mangrove Milkweed, grows, as its name suggests, in moist habitats and adjacent to Melaleuca wetlands and is the host of the Lesser Wanderer, *Danus chrysippus*. Because of similarities in colour, flight pattern and habitat this toxic butterfly's presence could offer some protection for the Fritillary from birds unwilling to chance being poisoned were they to attack it.

So to anyone seeking to establish a Fritillary friendly garden, in a moist area, it is suggested that the host plants for the Common Grass Yellow, which is *Breynia oblongifolia*, together with *Cynanchum carnosum*, be included along with *Viola betonicifolia* to enhance the mutually beneficial effects these butterfly associations provide. *Asclepias* is also a host for the Lesser Wanderer.

The painting depicts the violet in its sunny swampland setting, amongst swaying grasses, where the life-size caterpillars, each in their colourful instars or stages, munch contentedly on the violet leaves. The delicately patterned female is engrossed in laying her eggs as the male patrols his territory.

I was surprised and delighted when Frank and Helen sought permission to use the painting to adorn the front cover of their recently released book, "Create More Butterflies", before the painting was completed in October, 2000. I was also honoured to be commissioned to produce a painting of the Joseph's Coat Moth, on its host plant *Cissus opaca*, for the back cover. Delighted with the result, I proceeded to have it reproduced also as a fine art print, in all its vibrancy and colour, on quality watercolour paper. Each print measures 31cm by 21.6 cm.

With due consideration to the rarity of the Laced Fritillary, I felt it fitting that a Limited Edition Print would be a worthy tribute to this delightful species. Scott Farrell of Oregon Publications International was chosen to do the work. The resultant prints are testament to his fine skill and artistry. Beautifully reproduced on quality watercolour paper, these 24cm by 31 cm Limited Editions are ready for framing to be treasured for a lifetime.



It is my passionate desire that as these prints grace your walls, they will be a poignant and constant reminder that unless we also treasure our local environment and the diverse and beautiful creatures who inhabit it many more species will be lost, no longer there to enrich our lives. We are the ultimate losers.

I dedicate these Fritillary prints to the beautiful memory of Lorna Johnston, fellow artist, treasured friend and great encourager, who willingly shared her great wealth of knowledge and who sadly passed away unexpectedly 19.8.05, doing what she loved.

Lois Hughes

Prints can be obtained from Lois Hughes, 612 West Mt. Cotton Road, Mt. Cotton, Q. 4165. Phone 07 3206 6229. Currently the prints can be bought for a special price of \$50.00 for the Fritillary and \$40.00 for the Joseph's Coat Moth, postage and packing is \$10.00. They can also be purchased, in person, at Club events, phone to pre-arrange. The special price is to celebrate the publication of "Create More Butterflies" by Frank Jordan and Helen Schwencke.

REVIEWS

Terrestrial Invertebrates Status Review : Brisbane City

The Brisbane City Council worked with and commissioned the Queensland Museum to survey "the distribution of invertebrates in Brisbane City specifically targeting groups renowned for their use as bio-indicators. These comprised the ants, ground beetles, sucking bugs, spiders and land snails and to a lesser extent the butterflies, dragonflies and damselflies. Ten bushland sites with differing ecological profiles were chosen for the study" (Stanisic (2005), p.4).

The importance of this study is that it establishes baseline data about what species are currently present in the Brisbane Region. Future studies can now indicate any changes to the biodiversity of the study sites. Unfortunately many invertebrate species are likely to already have disappeared from the Brisbane Region and we will be unable to know what has been lost.

As the study notes, more bushland sites need to be surveyed to get a more thorough picture of the invertebrate biodiversity, and repeat studies need to be done on the sites already surveyed. This will improve the knowledge base, provide verification and improve the accuracy of the data collected.

Over and above this study, backyard biodiversity also needs to be surveyed. Overseas studies have shown that significant biodiversity can exist in household gardens. By surveying different types of gardens, pointers can be given about how people can improve their local biodiversity. This information also needs to become available. It is



the invertebrates that provide the food that enables other animal such as birds, bats, lizard, gliders (that is, anything insectivorous or omnivorous) to survive.

The outcome of this survey is published on a CD available from the Brisbane City Council. The document comprises 136 pages plus aerial photos of the sampling sites and species distribution appendices. It includes colour photos of the adults of the species sampled for each of the different groups in the study.

The Club would like to congratulate the Brisbane City Council and the Queensland Museum for undertaking a project like this, believed to be the first in Queensland if not Australia. This type of study helps to raise the profile of the importance of invertebrate biodiversity and invertebrate conservation.

Reference:

Stanisic, John [et.al] (2005). *Terrestrial Invertebrate Status Review : Brisbane City*. Brisbane: Queensland Museum.

Helen Schwencke

Dragonflies of Brisbane – a Poster by Ric Natrass

Dragonflies of Brisbane is an informative, well-designed new poster covering 33 species grouped in their subfamilies: the Perchers, Skimmers & Gliders, the Clubtails, the Hawkers, the Petaltails; the Darners; the Emeralds and the Tigertails. All the illustrations are life size and, where useful, small sections showing specific identifying details are shown.

Dragonflies, like butterflies, are popular insects. A great advantage this poster has is that it gives dragonflies English names that are easy for people to remember. This makes these animals much more accessible to the public and allows people in the community to relate to these animals. Congratulations goes to Ric for making this contribution.

Some of the printing is too dark, obscuring details on some of the dragonflies. Having recently encountered some of my own production problems with “Create More Butterflies” where the colour printing went awry, I understand how these things can be completely outside your control.

This poster is well worth the effort and makes a great addition to other animal identification posters that are available. The normal price is \$10, while Club members can purchase it at the discounted price of \$9 plus \$5 postage and handling.

Helen Schwencke

BACK ISSUES



Back Issues of the Club Newsletter are available at a cost of \$2 each plus postage (1-2 copies \$1.10 - 3-6 copies \$1.50).

OTHER GROUPS' ACTIVITIES

Dr. Tim Heard will be holding a workshop on stingless bees on 24 September at Brisbane Forest Park HQ, The Gap. Call the park on 3300 4855 if you are interested in attending.

Dr. Don Sands will be presenting a Richmond Birdwing Recovery workshop at Brisbane Forest Park on 8th October. Call the park on 3300 4855 if you are interested in attending.

The Botanical Artists' Society of Queensland Inc. presents "Floressence – See the beauty of plants in art" at the Auditorium Brisbane Botanic Gardens, Mt. Coot-tha from Friday 28th October to Sunday 30th October. Phone 3359 4781 for details.

The Cubberla-Witton Catchments Network Inc. are hosting a Fungi Conference on Saturday 5th November in the Undumbi Room, Parliamentary Annexe, Cnr. George and Alice Sts., Brisbane. Phone/Fax 07 3878 4581 for details or to register.

SPECIAL NOTE - NOVEMBER 2005 EXCURSION

Stony Creek and Bellthorpe: Field Trip Nov 19-20 2005

To be led by Jon Marshall and Alisha Steward

This excursion can be done in a number of combinations. You are welcome to join for the Saturday daytime only; daytime, evening and overnight; Sunday only or the whole trip. It is essential that you let Jon & Alisha (contact details below) know what your intentions are.

Background information

Stony Creek in the southern portion of the Conondale Range in south east Queensland. The Conondale Range is situated approximately 100 km north west of Brisbane in the Sunshine Coast Hinterland and was formed from a deeply dissected basalt plateau. Foothills rise from an altitude of approximately 200 m above sea level to a peak of 876 m at Mt Langley. The area forms the upper catchments of two major river systems; the Mary River draining to the north and the Brisbane River to the south. Stony Creek is a tributary of the Stanley and subsequently Brisbane Rivers.

Basaltic soils support subtropical rainforest along the valleys of the streams in the Conondale Range. This type of rainforest has been categorised as "complex notophyll vine forest" and is dominated by species of the families Cunoniaceae, Escalloniaceae,



Meliaceae, Monimiaceae, Myrtaceae, Proteaceae and Sterculiaceae. A vegetation survey conducted along the two small Stony Creek tributaries by members of the Queensland Naturalists Club identified over 300 species of plant (A. Moran, D. Boucharde and P. Williams, *pers comm*, 1995). Families recorded were consistent with complex notophyll vine forest but also included elements typical of “simple notophyll vine forest”, including members of the families Elaeocarpaceae and Lauraceae and the piccabeen palm, *Archontophoenix cunninghamiana*. No doubt there are numerous butterfly host plants amongst these plants.

The fauna of the Conondale Range is significantly rich on a national scale. The area has zoogeographical significance as a moist refugium and supports a number of uncommon and narrowly restricted species. It is particularly rich in frogs, reptiles, birds and mammals. Over 130 species of aquatic macroinvertebrates have been recorded from streams in the area including many that with restricted distributions in Queensland. Notable butterflies often observed in the area include Banks Brown, Wonder Brown and Richmond Birdwing.

Saturday’s Activity: Exploring Creek habitats for freshwater invertebrates

We will walk up-stream in the stream and explore a small un-named tributary (Banks’ and Wonder Brown location) perhaps as far as a waterfall. We’ll take it slow, and it isn’t too hard a walk, but there is a chance of slipping on wet rocks so care is needed. Along the way we will investigate aquatic macroinvertebrates and other creatures. Bring sand-shoes or similar you can use to walk in water and wear clothes for getting wet – and a change of clothes/towel for later, hat, binoculars, water bottle, lunch in a waterproof box in case you fall in etc. – no need to actually swim unless you want too! If you have reason to collect specimens please contact Jon 3275 1186 for details on what is required. Anyone staying only for the day can make their own way home at any time.

We will meet at Stony Creek State Forest Park at 10:30 – bring lunch.

Directions: Stony Creek State Forest Park is off the D’Aguilar Highway. Heading from Brisbane take the highway north and exit for Caboolture. Continue through Caboolture and on through Woodford. Turn right off the highway at Stony Creek Road 10 km past Woodford. Turn right just before the road crosses Stony Creek (there should be a sign to the park here) and follow this to the parking area on the left after one or two km. The forest is about 90 minutes’ drive from Brisbane. Toilets, picnic tables, drinking water and wood barbecues are provided. Firewood is supplied.

Saturday evening & night’s activity: Light-trapping

Those staying the night will gather back at the car park at 3:00 to drive to Griffith University’s Bellthorpe Field Station, where we are staying. It is an ex-forestry hut and there is a cost of \$5 per person, payable to us at the time please. There is electricity, bunk beds with mattresses and cooking facilities, pots, crockery, cutlery



etc. available. You need to bring folding chairs, pillow and sleeping stuff (min temp on average about 15° C in November) and food for dinner, breakfast and possibly lunch.

Sunday: Richmond Birdwing and other butterfly habitat

If anyone wants to come only for Sunday only please contact Jon and Alisha (3275 1186) for instructions to locate the excursion.

We intend to drive down “Branch Creek Road” from Bellthorpe to Stony Creek, arriving back around lunch time with an option of lunch in Woodford if desired. This track travels through Flooded Gum forest and includes a pretty reliable Richmond Birdwing location. After this people are free to explore more themselves or head home. This is a forestry track and there are several points to note. Only 4WD vehicles can use this track. If you can bring one please do. If you can’t don’t worry. We will have at least one and can leave 2WD cars at the Station and shuttle people.

IMPORTANT: If you are bringing a 4WD you will need to get a permit to use the road. This is not as scary as it sounds – it’s free and only involves filling out a form and sending it to EPA at least 2 weeks before the trip. Contact Jon (3275 1186) for details of obtaining this permit.

This will be a fun weekend. If you are coming it is essential that you RSVP to Jon or Alisha (3275 1186) so we know who to expect, and it is also essential to do this if you are bringing a 4WD or only coming Sunday.

See you there.

Jon Marshall and Alisha Steward

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Excursion: Local butterfly sites on Sunshine Coast hinterland and Garden visit at Eudlo

When: Sat 17th September, 1.30pm – 5pm (or as long as you want to stay during the afternoon)

Where: Meet at the Duck Pond, Palmwoods, near the Railway underpass (2003 UBD Sunshine Coast Map 76 Ref D-E3, turn off the old highway; at the Big Pineapple). For those wishing to come by train, get off at Palmwoods, and we’ll make sure you get back on at Eudlo for the return journey.

What: This excursion was cancelled February 2004 due to a heat wave. We will be looking at the plants around the Duck Pond area, and other local butterfly sites, including Eudlo National Park then moving on to Andrew Atkin’s garden.



Bring: Lunch, afternoon tea (to share if you wish), insect repellent, hats, sunscreen, etc.
Contact: Helen 07 3844 6677 or email hschwenc@dovenetq.net.au
Let us know if you're coming by train

Garden visit: Tribute to Lorna Johnston

(and afterwards Alexandra Hills Conservation area)

When: Sat 15th October, 1.30pm – 5pm
Where: Meet at Crystal Waters Park, cnr Riesling & Chateau St., Cleveland (2003 UBD Map 205, Ref L11, to move as a group to Lorna's garden. After spending approximately one hour we will move on to the Alexandra Hills conservation area, cnr Chipping Dve & Wimborne Rds., Alexandra Hills (2003 UBD Map 204 Ref L3)
Bring: Afternoon tea (to share if you wish), insect repellent, hats, sunscreen, etc.
Contact: Helen 07 3844 6677 or email hschwenc@dovenetq.net.au

Planning and Management Meeting

What: Our planning meetings are informative and interesting. As well as planning our activities we share lots of information. All members are welcome.
When: Wednesday 2nd November, 6.30-9.00 pm
Where: To be advised upon RSVP
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au to RSVP or for more details

Excursion: Stony Creek and Bellthorpe

When: Sat 19th and Sun 20th November, starting 10.30am Saturday – lunch-time Sunday (or as long as you want to stay during the weekend)

For details see article: Stony Creek and Bellthorpe: Field Trip Nov 19-20 2005

Bring: Depending on what parts of the excursion you choose to participate in: breakfast, 2x lunch, dinner, morning & 2x afternoon tea (to share if you wish), insect repellent, hats, sunscreen, and other items as needed and mentioned in the field trip description.
Contact: Jon or Alisha 3275 1186

Woodford Folk Festival, Butterfly Information Stall & Daily Walks

When: 27th December, 2005 to 1st January, 2006
What: Helen & Frank will hold a Butterfly information stall on the Butterfly Walk. This walkway leads up to the entrance to the folk festival main entrance from the ticket sales tent. This will be the second year of the Club's involvement with this event.
A **special feature** of this event will be a **Butterfly Walk starting 8am** on the mornings of the 28th, 29th, 30th & 31st December, starting from the General Store. This walk is outside the Festival itself. Also we will be conducting **Light trapping** on 3 evenings,
Where: Woodford Folk Festival site, Woodrow Rd, Woodford (2003 UBD Brisbane Map 33, Ref C13)
Volunteers wanted: We are looking for volunteers to help staff the Club's stall. Volunteering for 5 hours per day makes you eligible for a free ticket to the festival for the number of days of volunteering. Please contact me asap so that the required arrangements can be made.



If you plan to attend one of the above events, please contact the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is a platform for people to express their views and observations. These are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- Dr. John Moss and Dr. Tim Heard for scientific referencing and proof reading
- Helen Schwencke who developed the overall design

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.

Membership fees are \$15.00 for individuals and \$20.00 for families, schools and organizations.

Would you please advise bowden@itconnect.net.au if you get/change an email address.

Butterfly and Other Invertebrates Club Inc.

PO Box 2113

RUNCORN Q. 4113

Next Meeting: Garden visit: Tribute to Lorna Johnston (and afterwards Alexandra Hills Conservation area) Sat 15th October, 1.30pm – 5pm

